FIND MY PET – CROSS PLATFORM MOBILE APPLICATION

Design Manual

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Abstract

The purpose of this project is to create a cross platform mobile application (iOS & Android) where the user can post details of lost or found animals in their area. This mobile application will be written using Flutter Technology, an open-source UI software development kit created by Google. The application will present the user with the option to post or view lost and found animals in a selected area. There will be a range of features, such as push notifications if an animal is reported lost in a user's area, searching for posts based on location and communicating with other users via comments.

1. Introduction

This documents purpose is to design the potential look and feel of the mobile application. It will include hand drawn mocks of each potential screen. In addition, it will include a diagram dictating the planned flow of the application for a user. It will end with the potential structure of the database.

The application will be built using Googles Flutter technology, written in the Dart programming language. All development will be carried out using Visual Studio Code, a source code editor. The database being used is Cloud Firestore, a NoSQL database.

2. Technologies

2.1 Flutter

Flutter is an open source mobile UI toolkit created by Google. With one codebase, Dart, it allows the development of cross-platform native mobile applications. Meaning one programming language and codebase allows the creation of an application for both iOS and Android. The screens listed in the next section are outlines of what will be developed using Flutter.

2.2 Firestore Database

Cloud Firestore is a NoSQL database that will be used to store the data used in this project. It is a scalable database and offers the ability to set up real-time listeners in your code to keep app data in sync.

The database stores information in collections, these collections contain documents which contain data. The database structure section of this document shows the schema for the planned collections and the data to be stored in each.

3. Screens
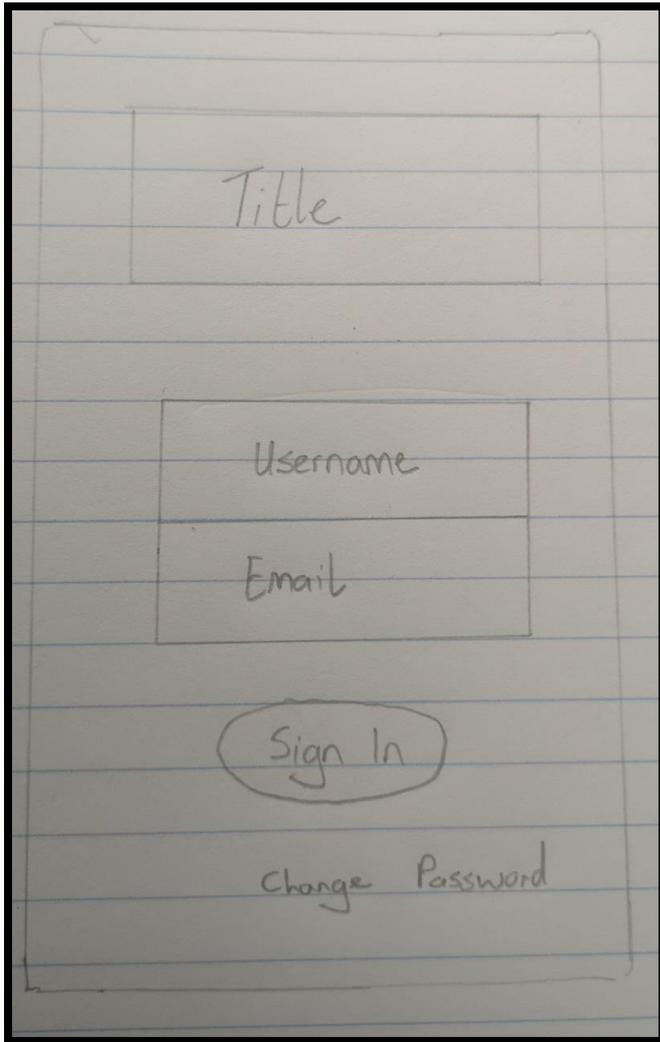
*Figure 1: Login Screen*
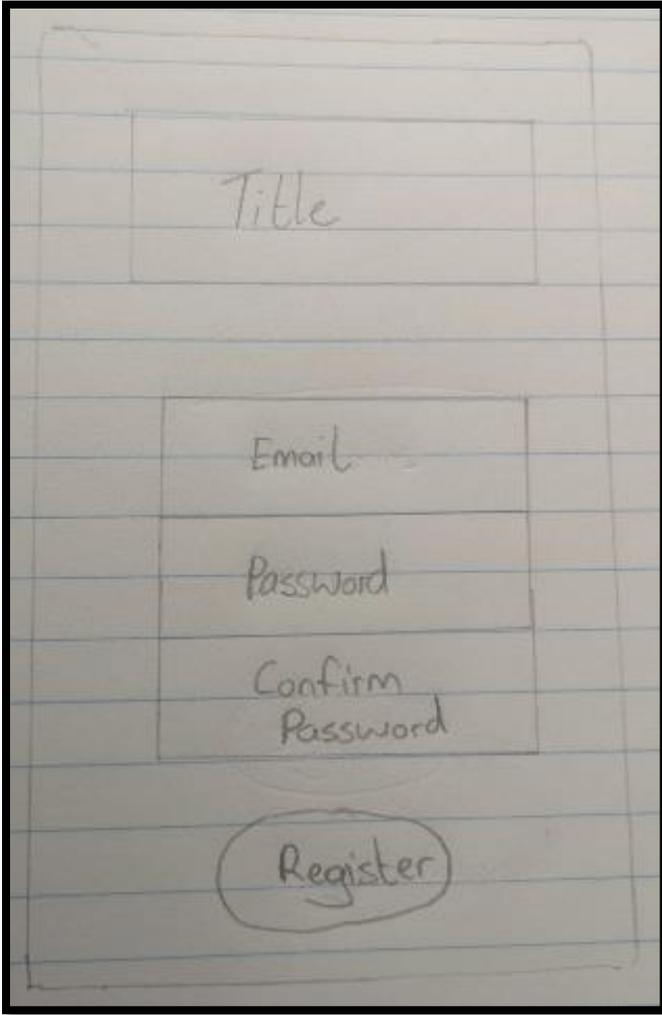
Figure 2: Create Account Screen
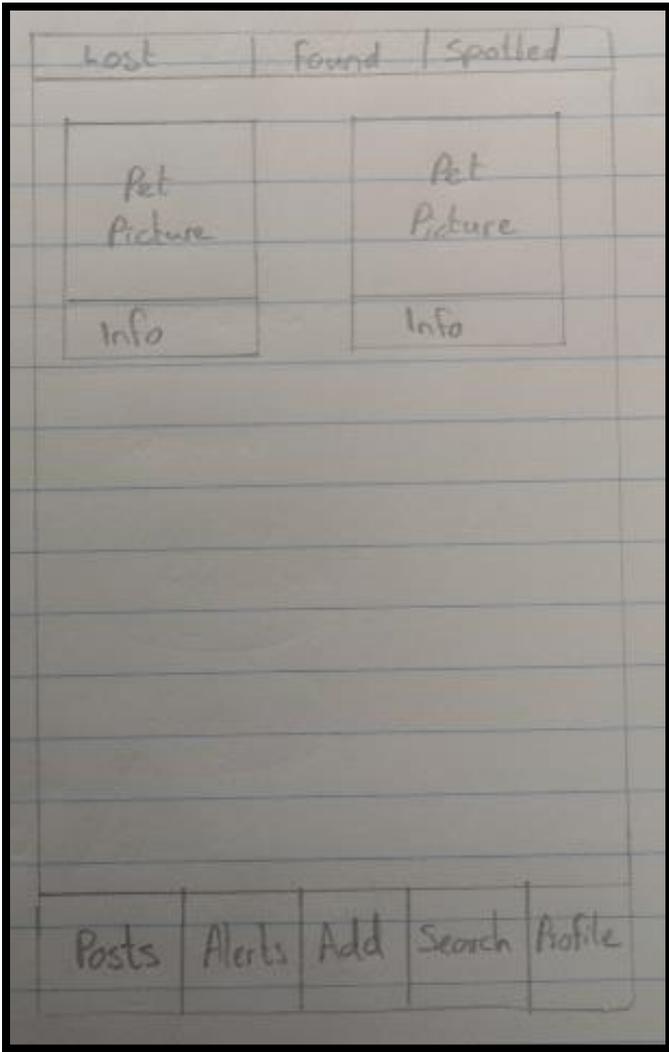
Figure 3: Post Overview Screen
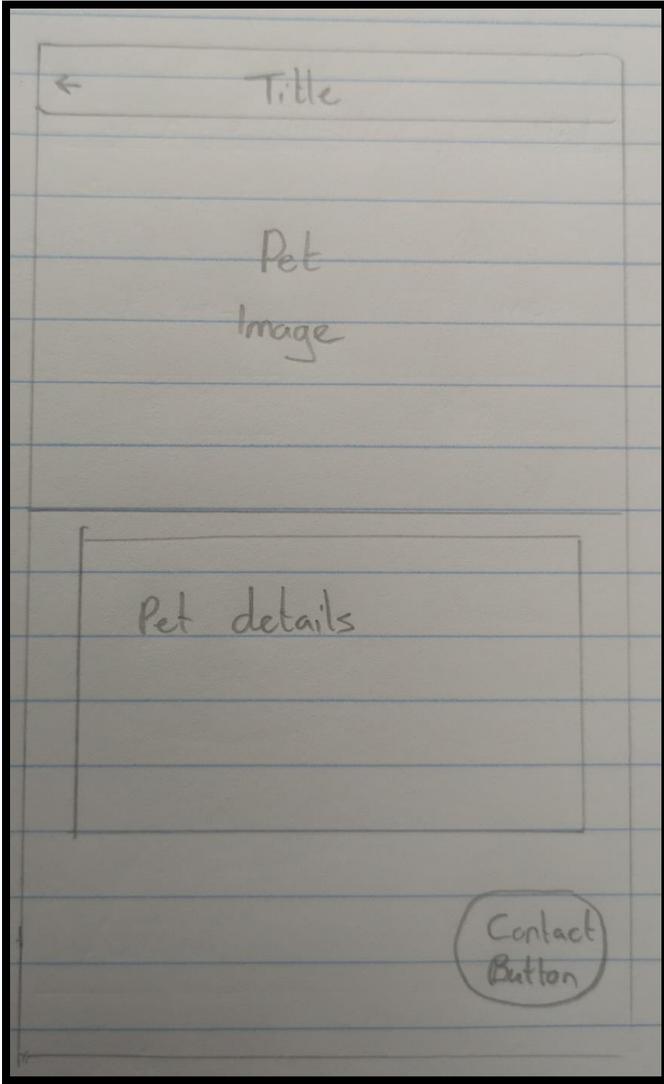
Figure 4: Post Screen
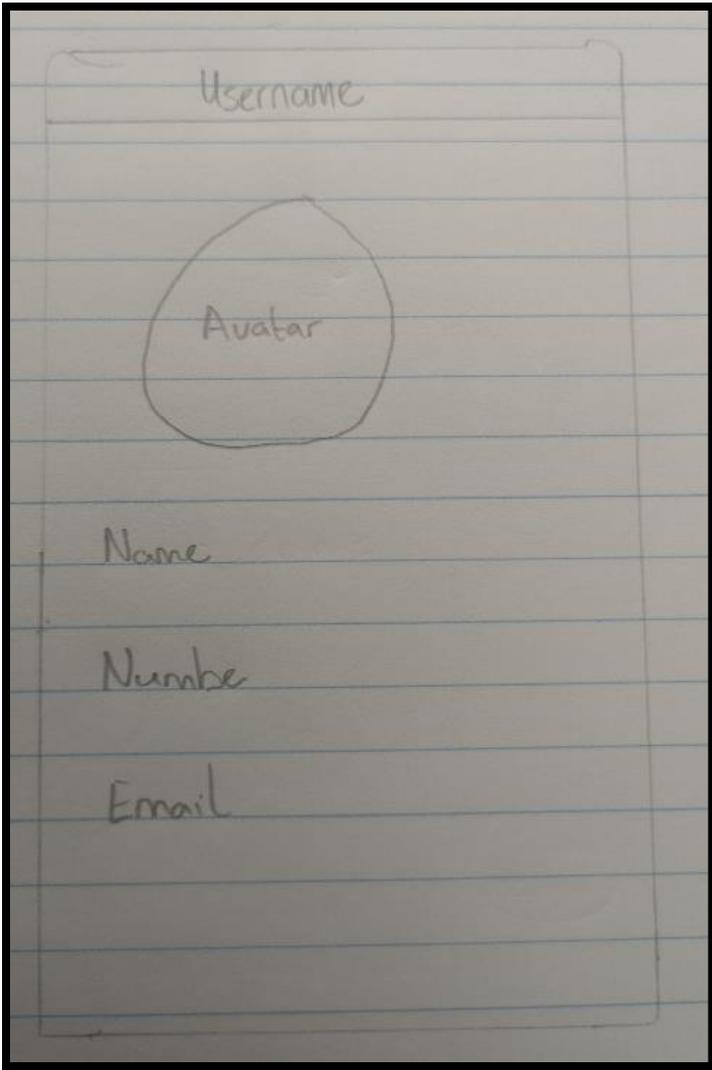
Figure 5: User Contact Screen
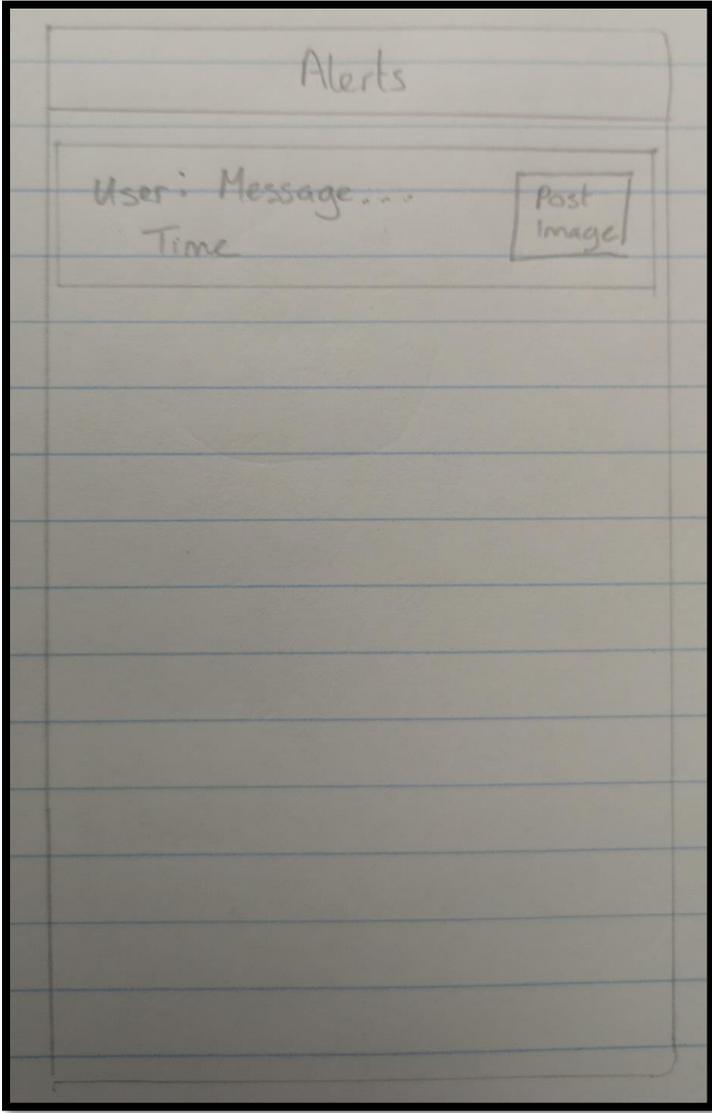
Figure 6: Alerts Screen

Figure 7: Post Form Screen
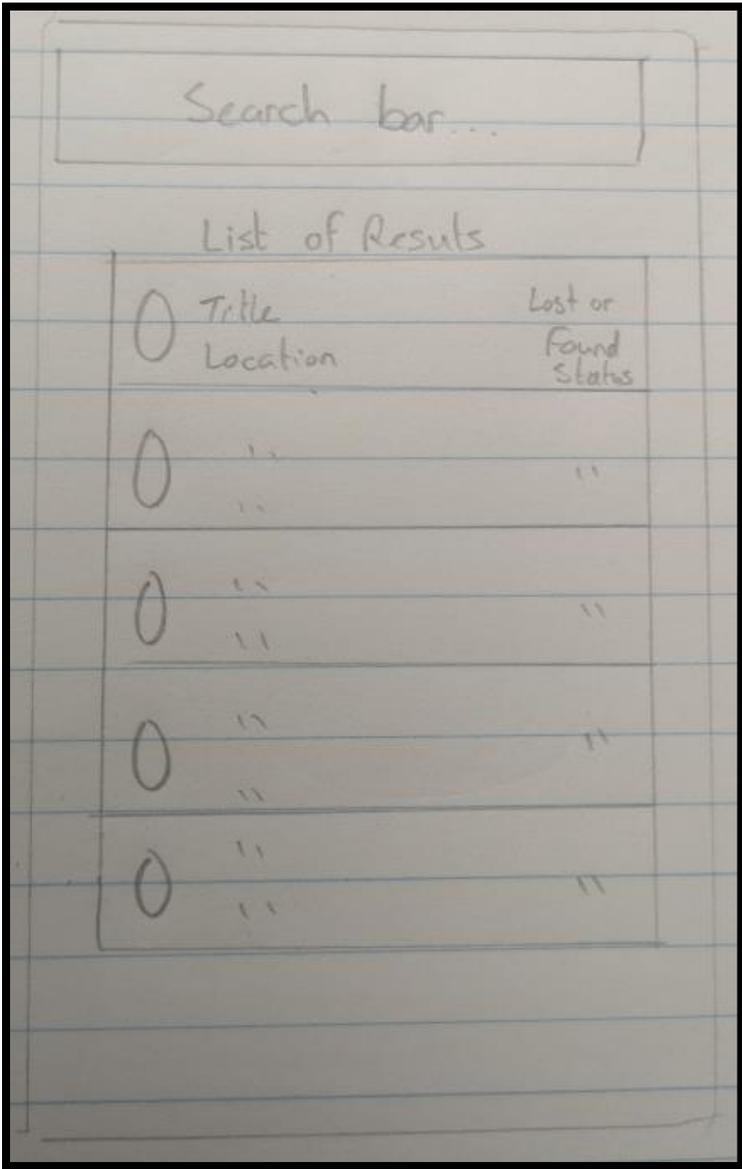
*Figure 8: Search Screen*
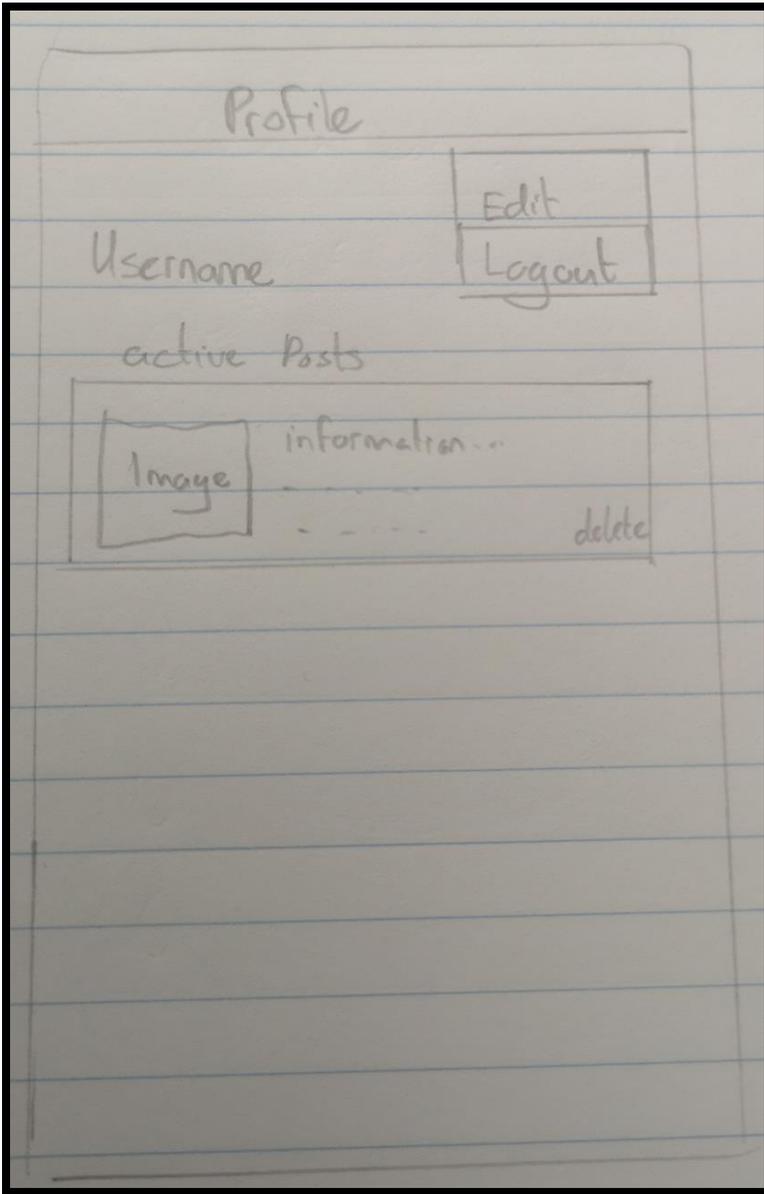
*Figure 9: Profile Screen*

4. Screen Flow
4.1 Initial Diagram
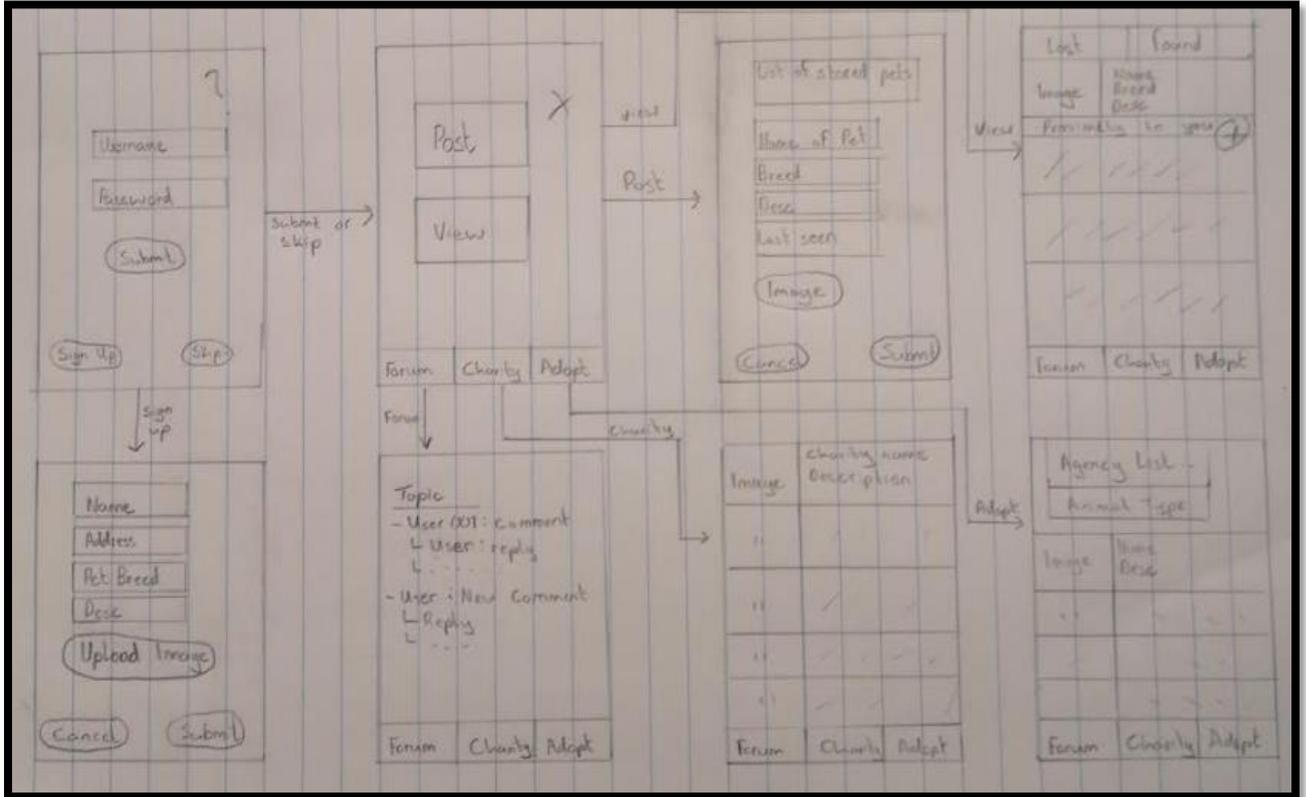
4.2 Revised Diagram
Displayed as a hierarchical layout to better understand what pages can be navigated to and from.
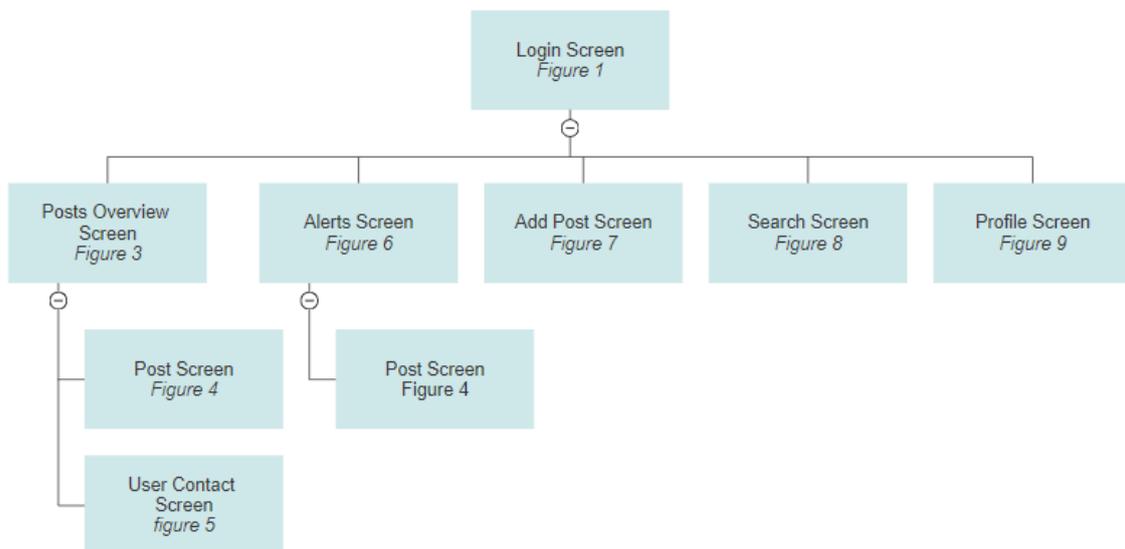
5. Database Structure
5.1 Posts Collection

Posts	
Date	Timestamp
Description	String
ImageUrl	String
Location	String
UserId	String
PetStatus	String
Position	Map
PostId	String
Title	String
TimeStamp	Timestamp

Figure 10: Posts Collection

5.2 Users Collection

Users	
Notification Token	String
Username	String
Email	String
Id	String
avatarUrl	String
Position	Map
TimeStamp	Timestamp

Figure 11: Users Collection

5.3 Alerts Collection

Alerts	
CommentData	String
ImageUrl	String
UserId	String
PostId	String
TimeStamp	Timestamp
Username	String

Figure 12: Alerts Collection

Plagiarism Declaration

Declaration

- I declare that all material in this submission e.g. thesis/essay/project/assignment is entirely my/our own work except where duly acknowledged.
- I have cited the sources of all quotations, paraphrases, summaries of information, tables, diagrams or other material; including software and other electronic media in which intellectual property rights may reside.
- I have provided a complete bibliography of all works and sources used in the preparation of this submission.
- I understand that failure to comply with the Institute's regulations governing plagiarism constitutes a serious offense.

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Signature: M.Walsh

Date: 20/04/2020